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RF500M
Radio Modem

Versatile radio modem

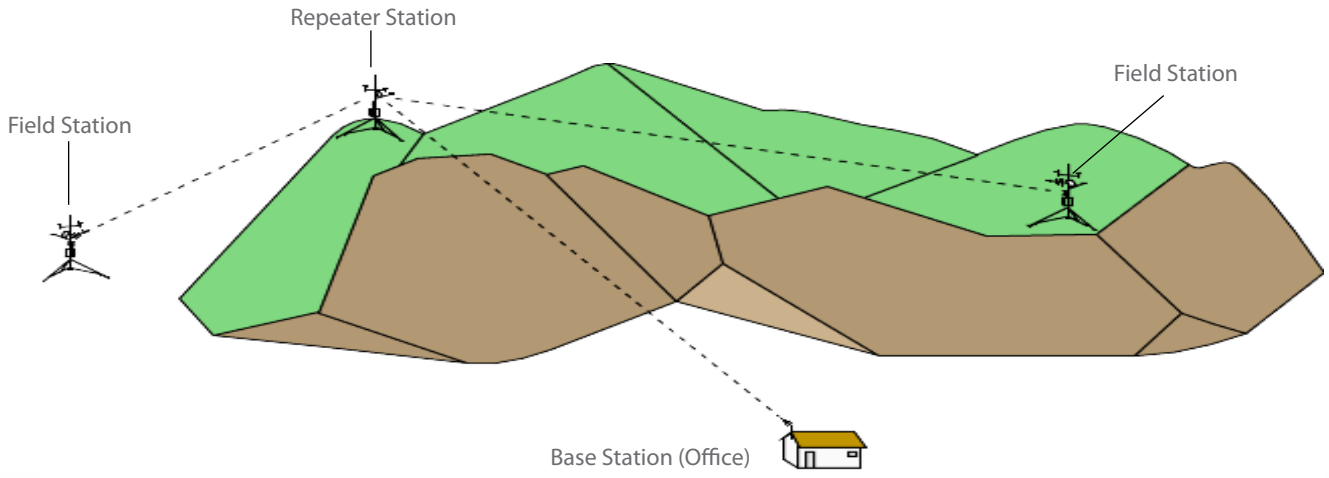
For networks with narrowband, UHF/VHF, licensed radios

Overview

The RF500M serves as a field, repeater, or base station communication interface, generally for our licensed radio applications. It provides an interface between a datalogger or computer and a radio and can be a stand-alone repeater when onsite logging is not required. The RF500M is powered from the CS I/O port or from an external power connection. This modem is software configurable, and has been designed to interface with data telemetry radios such as our RF320-, RF310-, and RF300-series VHF/UHF radios.

Benefits and Features

- Supports multiple radio configurations including our RF320-series, our RF310-series, our RF300-series, and the DataRadio DL-3400 radio
- Uses software (i.e., DevConfig) instead of hardware modifications to upgrade the operating system (OS) and change RF ID or other settings
- Provides an RS-232 port (DTE) for modem configuration or attachment of an RS-232 radio
- Avoids all collisions within a network, thus increasing polling speeds and reducing overall current drain



Our RF networks require line-of-sight transmission. The mountain in this drawing obstructs line-of-sight with the base station. Use of the repeater station allows the base station to receive data from the field stations.

Ordering Information

Radio Modem

Must choose an OS option and a radio jumper setting option (see below).

RF500M Radio Modem.

OS Options (see discussion at right)

-PB PakBus OS.

-AL ALERT Dual Mode OS.

-DA Dial OS.

Radio Jumper Setting Options

-MJ Jumper for RF320-series or RF310-series radios.

-RJ Jumper for RF300-series radios.

-UJ Jumper for radios purchased directly from DRL.

Temperature Range Options

-ST Standard -25° to +50°C (default).

-XT Extended -55° to +85°C.

Warranty Length Options

-SW Standard one year warranty (default).

-XW Four year warranty extension.

Accessories

10873	9-pin female to 9-pin male serial data cable (6 ft); cable is required to connect RS-232 digital radios.
SC532A	CS I/O Peripheral to RS-232 Interface; this interface is required to connect a PC to the modem's CS I/O port. Typically the PC connects to the modem's RS-232 port, but the modem's CS I/O port can be used if a digital radio is already connected to the modem's RS-232 port.
15966	Wall Charger 12 Vdc, 800 mA Output, 100 to 240 Vac, 50 to 60 Hz with Barrel Plug, 6 ft Cable.
14291	Field Power Cable 12 Vdc Plug to Pigtail (2 ft) connects with a 12 Vdc power supply.
14020	Field Power Cable CS I/O to 12 Vdc Barrel Plug (2 ft) connects with datalogger.

Specifications

- Voltage: 7 to 20 Vdc
- Dimension: 160 x 95 x 22 mm (6.31 x 3.69 x 0.88 in.)
- Weight: 0.18 kg (0.4 lb)

Current Drain

- Active: <15 mA
- Quiescent: <350 µA

Operating System (OS) Options Descriptions

PakBus OS

Considered the standard for the RF500M, the -PB OS uses TDRF polling to quickly and efficiently move data through a network. Each station can be individually dialed by LoggerNet. This OS is compatible with -TD, -PB, and our current generation of PakBus dataloggers.

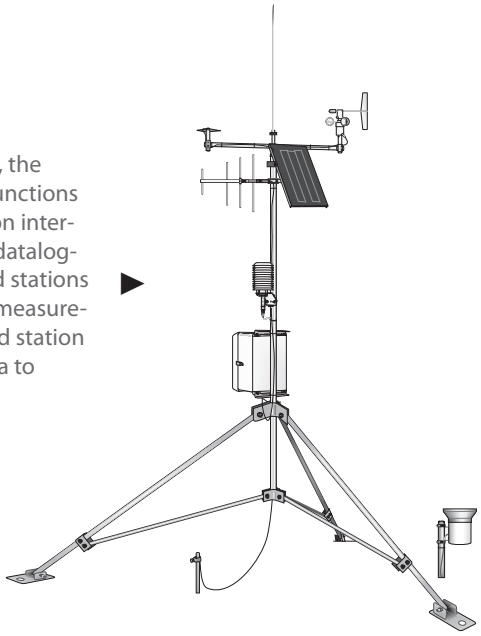
ALERT Dual Mode OS

The ALERT (Automated Local Evaluation in Real Time) OS allows for transmission, repeating, and reception of binary ALERT formatted data. It is a derivative of the -PB OS, and therefore supports both ALERT and TDRF communications (allowing true two-way communication with a station). This OS is compatible with the CR200(X)-series, CR800-series, CR1000, and CR3000 dataloggers.

Dial OS

The dial OS works with both mixed-array and PakBus/table-based dataloggers. Each station can be dialed by LoggerNet for downloading data, sending programs, and performing other tasks. Additionally, this OS allows stations to create point-to-point networks for sharing of measurement and control tasks.

At the field station, the RF500M modem functions as a communication interface between the datalogger and radio. Field stations are located at the measurement site. This field station uses a Yagi antenna to transmit the data.



The RF500M can be used as a stand-alone repeater. Repeater stations provide a communication relay between stations that cannot communicate directly due to distance or obstacles. Repeater stations use omnidirectional antennas.

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